

REMARKS/ARGUMENTS

Pending entry of this amendment, claims 1-14, 16-24, and 27-56 remain in this application. Independent claims 1, 30 and 51 have been amended. Claims 15, 25-26 have been canceled herein. No new claims have been added. Claims 57-131 have been withdrawn as a result of an earlier restriction requirement. In view of the Examiner's earlier restriction requirement, Applicants retain the right to present Claims 57-131 in a divisional application.

1. Rejection under CFR 1.75 (c)

Claim 15 stands rejected under CFR 1.75(c). Claim 15 has been canceled. Accordingly, the issue is now moot.

2. §102(b or e) Rejections

The Examiner has rejected Claims 1, 2 and 51 under 35 U.S.C. 102(b or e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ishiguro et al (5,022,904), Yokoyama et al (6,535,679), Schneider et al (4,557,561), Hicks (4,579,571) or Ishikawa et al (5,895,515).

Respectfully, the rejection is overcome. Applicants have amended claims 1 and 51 to further clarify the differences between the present invention and the prior art. In particular, the present invention is directed to *pulsed* doping and drying. In particular, as now claimed in claim 1, the first doping atmosphere is provided, in a pulse, it is then held in the vessel, partially evacuated, and refilled with the second atmosphere wherein the first and second atmospheres are the same. No such *pulsed* method is taught or suggested by the prior art references, either alone or in combination. In particular, none of the references teach a "pulsed doping" concept wherein the atmosphere is provided, held, evacuated and refilled thereby exposing the perform to multiple shots of the same dopant atmosphere. This process has the advantage of reducing the amount of gas required (and the amount of waste gas generated) as compared to prior art *constant flow* methods. Accordingly, the rejections of claims 1, 2 and 51 should be withdrawn.

3. §103(a) Rejection

The Examiner has rejected Claims 3-14, 16-50, and 52-56 under 35 U.S.C. 103(a) as being unpatentable over Ishiguro et al (5,022,904), Yokoyama et al (6,535,679), Schneider et al (4,557,561), Hicks (4,579,571) or Ishikawa et al (5,895,515).

Respectfully, the rejection of Claims 3-14, 16-50, and 52-56 is also traversed. In particular, none of the cited references teach or suggest pulsed doping or drying as in the present invention. In particular, relating to claim 1, as amended to further clarify the invention, none of the references teach the evacuation step combined with the partial refill steps wherein the atmospheres are the same. As the rejection relates to claims 30-50 and 52-56, none of the prior art references teach *holding* the doping atmosphere, nor do they teach providing the atmosphere in a *pulse*. "Pulsing" is defined in the application as being "a mass or batch of process gas is flowed into the chamber 114 prior to the

Appl. No.: 10/053,365
Amdt. Dated: 8/31/2004
Reply to Office Action of: June 2, 2004

beginning of the treating time t_r , and the flow into the chamber is then interrupted such that flow of the process gas through the chamber is fully or substantially reduced..." See Para. [0053]. Webster's Dictionary defines a pulse as a beat or throb or a regular rhythmic beating. This is clearly different that the prior art constant flow processes. Respectfully, Examiner's utilization of the term "pulse" is inconsistent with the specification and common usage of that term.

4. Conclusion

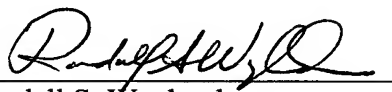
Based upon the above amendments, remarks, and papers of records, Applicants believe the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Applicants believe that no extension of time is necessary to make this Reply timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Randall S. Wayland at 607-974-0463.

Respectfully submitted,

Date: 8/31/04


Randall S. Wayland
Attorney for Assignee
Reg. No. 36,303
Corning Incorporated
SP-TI-03-1
Corning, NY 14831
(607) 974-0463